

System and Method for Scheduling Transmit Messages Using Credit-Based Flow Control

Abstract of the Disclosure

A system and method for facilitating the scheduling and transmission of transmit protocol messages. Initially, a write credit count is maintained indicating the number of write credits available to a transmit message processor. Upon receipt of a data frame for transmission to a data pump, the transmit message processor determines whether the write credit count is greater than 0. If so, the frame is dequeued and the message is sent to the data pump for transmission on the wire to a receiving peer end. However, if the write credit count is 0, a `waiting_for_write_credit` flag is set to true indicating that the transmit processor has a frame waiting for transmission, but lacks sufficient write credits to send the frame to the data pump. Once an additional write credit is received from the data pump, the write credit count is incremented and the `waiting_for_write_credit` flag is checked to see if any frames are waiting to be sent. If so, the transmit message processor is activated, resulting in the transmission of the waiting frame.

Figures

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